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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

GPO 123668

SEP 3 1938

Not for publication without
prior consent of this division.

REPORT FOR THE WEEK ENDING SEPTEMBER 3, 1938.

HAVRE:

Precipitation for the month of August totalled 1.36 inches, or slightly above normal. Rainfall, May thru August, was 145 percent of the station 20 year average, and quite well distributed.

Favorable weather prevailed during the week, and threshing experimental grain plots was practically completed. Yields as a whole were the best since 1932, but varied considerably thruout the field, irrespective of crop or seed bed preparation. An indication of the general results is shown by the following unchecked average acre yields:

	On Fallow	After Grain	All Plots
Spring wheat	22.8 Bus	13.6 Bus	17.7 Bus
Winter wheat	34.4 "	0.6 "	20.9 "
Barley	37.4 "	20.4 "	27.3 "
Oats	45.7 "	38.5 "	38.6 "
Spring rye	36.3 "	17.4 "	21.2 "

Spring wheat harvest in Hill County is progressing rapidly, production ranging from less than 10 to more than 35 bushels per acre.

Visitors included A. D. Ellison and H. D. Hurd, S.C.S.; also E. J. Bell of A. A. A.

Maximum temperature, 93°; minimum, 48°; precipitation, none.

JUDITH BASIN:

The weather the past week has been warm and very dry. Corn is beginning to show the effect of the dry weather. Wind has caused some slight soil movement at times this week. Conditions have been favorable for threshing and that part of the seasons work has been completed except for the cleanup from the nurseries. All crops suffered from the lack of normal precipitation during August. Total precipitation to August 31, which was 11.33 inches, is 0.09 inch above the 29 year average for that period.

Maximum temperature, 90°; minimum, 40°; precipitation, none.

HUNTLEY:

A shower on September 1 kept teams out of the field for one day during the week but considerable advance was made in fall work. Fall plowing was completed and the preparation of seed beds for winter grains should be finished today. Seed corn was picked and the corn crop was cut. Late sorgo, soybeans and crested wheatgrass were also harvested. A supply of seed wheat and rye was cleaned and made ready for planting. Flax and crested wheatgrass were threshed.

Winter wheat planting is well under way on the benchlands with fallow seeding almost completed. Stubble seeding is being delayed on some farms because of the dry soil. Winter wheat sown on fallow should come up quickly as moisture and temperature conditions appear to be favorable for prompt germination.

The annual farm tour of the station sponsored by the Great Western Sugar Company was held during the week. In addition to some 130 farmers and Sugar Company men, members of the Montana Experiment Station staff were present, including Director Clyde McKee, Professors Post, Morris and Afanassieve.

Maximum temperature, 93°; minimum, 42°; precipitation, 0.24 inch.

SHERIDAN:

Warm weather continued over the first half of the week, followed by cool, cloudy weather, with high winds on the 31st and 1st.

Work during the week consisted mainly of harvesting corn and sorghums, picking seed corn, and working fallow in the bulk fields where it had gotten quite weedy. Fallow has required more work than for a number of years. Sudan grass for seed, and the last of the flax were also harvested.

Mr. Quayle was at the station the first of the week.

Maximum temperature, 95°; minimum, 45°; precipitation, none.

DICKINSON:

No rain fell during the week so the soil still remains too dry for cultivation or any appreciable growth of vegetation. August precipitation of 0.82 inch was less than half of normal for the month. Total precipitation to September 1 was 14.22 inches or two inches above normal for the eight months.

An increase field of corn was cut and run into the silo.

Some native hay is still being cut in the district although it is past its prime condition. Blue grama seed has about half shattered but some of this grass is still being harvested. A few lots in the district which have been threshed have yielded well.

Threshing and cleaning of nursery grains and grass has continued.

Maximum temperature, 94°; minimum, 40°; precipitation, 0.03 inch.

MANDAN:

Agronomy - Dry weather continued throughout the week. Fall plowing was completed. The soil was very dry and turned up lumpy in contrast to 1936, when it turned up as powder. It is in good condition for winter.

Sorgo varieties were harvested. The yields on all varieties were good. The green weight averaged better than 7 tons per acre.

Maximum temperature, 92°; minimum, 45°; precipitation, 0.05 inch.

Cooperative Grazing Experiment - Steers were weighed at the end of August and showed good gains for the month, but the gains are still behind those in 1937.

The following gains were made by steers in the various pastures. The 7-acre crested wheatgrass steers were turned in with those in the 12.5 acre crested wheatgrass pasture the first of August. They made no gain during the first 15 days of August. All the steers of this pasture were turned into the small native reserve pasture the middle of August.

Gains of yearling steers in the various pastures for August and for the season to August 29:

Pasture (acres)	No. steers	Gain per head (lbs) August	100 days
100	10	66	208
70	10	78	212
50	10	65	197.5
30	10	49	194
70 (rotation)	14	63.6	200.7
7 Crested wheatgrass	4	38.8	170.1
12.5 Crested wheatgrass	6	20.0	165.0
93 Reserve	11	50.0	196.8

Horticulture - Fruit picking has been in progress during the week. A large number of Minnesota and South Dakota hybrids fruited this year, and while some of them were prematurely ripened, the yields were very good. Waneta was outstanding in yield and size. There was also a good yield of hybrid crabapples none of which had much size.

Melons were harvested during the week. The variety Northern Sweet was the best in quality but was somewhat lacking in size. The average weight was about 10-12 lbs. The flesh is an attractive orange red but is somewhat coarse.

It seems a good year for cucurbits. Most of the vines have now dried down displaying the number of fruits underneath the leaves. Golden Hubbard still is one of the leaders in the squash trials although the Golden Delicious seems slightly earlier.

Tulips were dug and preparations made for next year's tulip display.

Arboriculture - The removal of dead wood in the various experimental tree blocks was completed the first half of the week. Work has commenced on the taking of soil moisture samples in section D of the main windbreak and in combination 3. Sampling is being done to 10 feet this year as compared with 6 feet former years.

BELLE FOURCHE:

Hot weather prevailed during the first half of the week, but the last 3 days were unusually cool. Two light showers were received, but they were of no benefit to plant growth, and the long summer drought continued unbroken for the fourteenth consecutive week.

The precipitation for August was 0.60 inch, which is approximately 42 percent of normal for the month. Only 2.65 inches of precipitation were recorded from June to August, inclusive, as compared with the average of 6.37 inches for the 3 months. The total for the year to date is 4.43 inches below average.

All crops on the dry land rotation field have been harvested, except potatoes and one plot of corn. The leaves of potato vines are turning brown, and the yields of potatoes and all late crops will be very light.

Maximum temperature, 95°; minimum, 49°; precipitation, 0.22 inch.

ARCHER:

Low hanging clouds, fog, and rain were the outstanding weather features during the week ending September 3. The total precipitation recorded during the week was 3.85 inches. Today, September 4, the weather is clearing. The total precipitation during August was 2.38 inches. The 25-year average is 2.01 inches. The September average for the same period is 1.15 inches. To date September has received 3.60 inches of precipitation. A slow rain totalling 2.14 inches occurred September 2. Little run-off occurred.

Corn and millet will be greatly benefited by the recent rains. Beans are about ready to harvest. There is slight hope for the improvement of the potato crop. Buffalo and grama grasses are green. All winter cereals have emerged.

Station activities, aside from threshing crested wheatgrass August 29 and cutting Russian thistles on newly seeded grass land, consisted of cleaning seed and repairing fences.

Maximum temperature, 82°; minimum, 50°; precipitation, 3.85 inches.

NORTH PLATTE:

Temperatures during the week were cool. Rain began falling Thursday night and fell intermittently for the next forty-eight hours. The rain fell gently and there was no run-off from cultivated fields. On Sunday night (September 4) a heavy two inch rain fell during the night. Part of this ran off. Up to the time of writing this report (Monday September 5) 2.78 inches of precipitation have fallen in the first four days of September. This is 1.45 inches above the normal for the month. The rainfall to date since January first is above the normal for the year. The low yield of crops can be attributed to lack of subsoil moisture and a poor distribution of the rain which fell.

More moisture will be stored in the soil at seeding time this fall than there has been for the past few years.

The total precipitation for this month of August was 1.58 inches or 0.87 inch below normal.

All corn on the plots was cut early in the week, except that in wide spaced rows and in the continuous cropping series. The fodder weights this year will be about average and the grain yields will probably be better than was expected a few weeks ago. Most plots will yield at least ten bushels per acre.

Maximum temperature, 92°; minimum, 54°; precipitation, 1.78 inches.

Precipitation for period from January 1 to September 3 and the 31-year average for the same period, 1938 - 18.56 inches, Normal 15.22 inches.

AKRON: (Report for week ending August 27, 1938.)

There were three rains this week, one of which may be of benefit to grain sorghums and to dry field beans. They were not sufficient, however, to moisten the dry surface of fallow plots on the rotation block. August has thus far produced less than an inch of moisture.

Harvesting some prematurely ripened proso and odd station jobs occupied the station force during the week.

D. W. Robertson and J. J. Curtis from Fort Collins, visited Friday.

Maximum temperature, 101°; minimum, 53°; precipitation, 0.46 inch.

AKRON:

Rainy weather continued in the region, some sections receiving near torrential quantities. Friday afternoon a dense for impelled by an east wind enveloped the region and cut visibility to 200 feet. That night there were radio reports of torrential rains in the foothills to the west.

Beans are setting pods, and grain sorghums that have not been too severely injured are filling. It now appears a question whether early varieties such as Highland, Improved Coes, Sooner and Cheyenne will fully mature. Winter wheat seeding time is near at hand and it is doubtful if enough rain has been received to properly moisten any seed bed other than fallow.

Mr. A. W. Krofchek of the Cheyenne Horticultural Station visited Friday morning.

Maximum temperature, 89°; minimum, 52°; precipitation, 0.36 inch.

COLBY:

The weather this week has been much cooler and wetter. It was cloudy nearly all week, and the last four days were rainy and misty. The rain has been general over this section of the state, but very spotted in amount. In places as much as three inches have fallen, and in others not far away no more than trace. The weather is still foggy, misty and cloudy, and the drier spots may get considerable moisture, also, before it lets up.

The wet weather came too late for corn and, in many instances, for the sorghums. Many fields of sorghums dried up without even heading, and many of the heads are blighted in fields where the crop headed nicely. On the station where there was an abundance of stored moisture, mostly on ground fallow more than one year, the sorghums are very promising. On ground fallow only one year and on crop land they are very spotted in both growth and heading.

Maximum temperature, 98°; minimum, 57°; precipitation, 0.77 inch.

Precipitation for August, 1.04; 51-year average, 2.23 inches. This was the windiest August on record at this station.

Precipitation, January 1 to August 31, 16.76; 51-year average, 13.78 inches.

HAYS:

The weather has been cooler and more humid but the light showers have added no moisture to the soil.

Sorghum crops continue a very slow development and promise little grain on crop land. Corn had reached the point where deterioration had started and for that reason was harvested September 1.

During the week a number of soil moisture determinations were made. The fifth set of plots used for date-tillage-experiments received their initial treatment, and drainage ditches were cleaned out.

Maximum temperature, 103°; minimum, 61°; precipitation, 0.27 inch.

GARDEN CITY:

A very fine rain was received this week. It started Friday at noon and continued intermittently until 8:00 A.M. Saturday. The total amount was 1.82 inches. Although this came too late for the row crops, it will help in making a better seedbed for wheat.

All the dams on the basin lister project held, even though some were on slopes varying from 2.5 percent to 4.3 percent. Although milo has been burned considerably and will probably yield no grain, there is a noticeable difference in growth between the basined and not basined plots where the rows run up and down the slope. The difference is in favor of the basined plots. There is no noticeable difference between methods on the contour.

Station visitors were C. O. Grandfield, U.S.D.A., Manhattan, Kansas and Dean McCammon, County Agent, Dodge City, Kansas.

Maximum temperature, 97°; minimum, 63°; precipitation, 1.83 inches.

DALHART:

At the end of August the total precipitation for 1938 was 6.89 inches which makes this year the second driest on record for this period. Complete heading had not occurred on any of the sorghum plots in the rotations. In the variety tests the sorghums ceased heading at different stages ranging from the first head emergence to nearly fully headed. A few of the early varieties completed heading. The variety which appeared to have the greatest ability to complete heading under adverse conditions was a selection carried as milo X hegari, 14-11-2. It appears probable that considerable headway has been made in securing selections of desirable types resistant to milo-disease out of Beaver, Sooner, and Quadroon milos. As only a few heads have appeared in the late date of planting of sorghums it seems that maturity will be unlikely. Cowpeas on the rotations reached a dormant stage at from 6 to 10 inches in height. With a late first frost the sorghum varieties on fallow appeared to be the only grain yield promised on the station; in order to accomplish this it would be necessary to keep birds away throughout the entire period of daylight however.

Work during the week has consisted chiefly in hoeing weeds from roadways and a few fence rows, cleaning up the yards of late June formed sand drifts, finishing picking of grapes ahead of complete bird damage, and miscellaneous jobs largely of a seasonal nature.

A severe outbreak of 'sleeping sickness' among horses is now going into its third week in this area. One horse has been lost on the station.

Since August 31 maximum temperatures and showers encourage the feeling that the sorghums may yet make good forage (but the rains are about 3 weeks too late to make grain). As this is written late Saturday afternoon dark clouds have gathered and nearly an inch of rain has fallen since 3 p.m. This follows 0.23 inch received Friday night, and 0.04 of an inch on the first.

Maximum temperature, 96°; minimum, 58°; precipitation, 0.27 inch.

BIG SPRING:

Every morning during the past week was cloudy with good rain signs appearing, but before noon all signs disappeared and the rest of the day remained clear and warm. The rainfall for the month of August totaled 0.45 inch as compared with a normal of 1.98 inches. This shortage of August moisture caused feed stuff to burn considerably during the past week. Sumac in the increase fields is going down in spots, so it is probable that this will be put in the silo next week.

Cowpea hay from the rotation plots was hauled to the barn this week; good yields of high quality hay was obtained. The M.C. corn plots and others in the rotations were harvested; the corn ear worm had damaged the plants so much that little or no grain matured.

Maximum temperature, 95°; minimum, 63°; precipitation, none.

TUCUMCARI:

A shower of 0.29 inch last night, following 0.13 inch the preceding night, gave temporary relief to firing crops. A general, soaking rain would benefit late planted row crops, but would be of little aid to early crops. Sparrows, lark buntings, and blackbirds are more numerous than in many years. Station crops are being stripped as fast as seed reaches the milk or dough stage. Shooting has never been so ineffective, for there is no grain near-by and the station concentration of birds is very heavy, with no possibility of driving them to surrounding fields.

August was the second windiest, the third hottest, the driest, and highest in evaporation of any August on record. Normal precipitation is 2.91 inches; only 0.24 inch was received. During June, July and August were received 2.72 inches. Evaporation exceeded 12 inches in August.

Work included harvest of Sudan grass and cowpeas, bagging of heads for pure seed, care of trees, and mowing and hoeing of weeds.

Cloudy days and lower temperatures have prevailed much of the week.

Maximum temperature, 95°; minimum, 57°; precipitation, 0.42 inch.

Precipitation for the year to date, 8.06 inches, or 64 percent of normal for the period.

WOODWARD:

The weather continued hot and dry through the week until Friday afternoon at which time a good shower (0.52 inch) fell. This was followed by light showers through the night and Saturday to total 0.96 inch. Very little run-off was noted following the rain. August came to a close with a total precipitation of 1.45 inches or 1.00 inch below normal. The moisture supply was getting very low before the rain as indicated by the plants and by soil moisture samples.

Kafirs on rotation plots are showing quite a variation in maturity. Kafir heads in rotation 154 and 156 have turned white while heads in 151 and 155 rotations are dark green. Cowpea harvest was completed just ahead of the rain. All nursery stock is showing better growth and vigor than usual this year, due to rains earlier in the season. Flowering willow is blooming heavily again.

General field work consisted of pruning nursery trees, hoeing weeds from windbreaks, nursery, and contour plantings, harvesting cowpeas, taking soil moisture samples, cleaning weeds from roadways, and repairing fences.

Dr. C. E. Leighty, R. R. Graves, Principal Specialist in Dairy Cattle Breeding, Washington, D. C., and Robert Hunter of the Hays Station were visitors during the week.

Maximum temperature, 102°; minimum, 66°; precipitation, 0.96 inch.

LAWTON:

Although a few good rains were scattered around over the state during the month, the summer drought that began the latter part of June remained unbroken in the vicinity of Lawton at the close of August. Precipitation for the month of August amounted to 0.76 inch, and 12.229 inches of evaporation were recorded. During the month there were 21 days when the maximum temperature was 100°or more, the monthly average being 100.1°.

Sorghum harvest was completed during the past week and considerable threshing has been done. Yields will be determined when the grain has been cleaned and tested. Cotton has opened rapidly and the first picking has been made on 18 rotation plots in Fields A and B.

Threatening weather prevailed during the later part of the week and temperatures were moderate. The precipitation September 1 to 3 measured 0.28 inch.

Visitors during the past two weeks include Prof. E. Hickson and Mr. L. L. Ligon, A. & M. College, Stillwater, Oklahoma; Dr. E. C. Auchter, Dr. C. E. Leighty, Dr. H. W. Barre, and Dr. J. O. Ware, Washington, D. C., and Messers E. F. Chilcott and D. A. Savage, Woodward, Oklahoma.

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REPORT FOR THE WEEK ENDING SEPTEMBER 10, 1938.

HAVRE:

Warm weather early in the week was succeeded by cooler, showery conditions at the close. Corn ripened rapidly, harvesting being started in the D.L.A. project. Considerable nursery material was also picked. In general yields of shelled corn will be above average. A light second crop of alfalfa is in the swath, but frequent showers have interfered with curing.

Visitors included E. B. Wilson and party of F.S.A., Denver.

Maximum temperature, 92°; minimum, 45°; precipitation, 0.54 inch.

JUDITH BASIN:

Precipitation was recorded on five days during the week. Cloudy weather prevailed most of the time.

Corn is beginning to dry up, and cutting has been started on some of the bulk seedings. Good ears are formed on many of the plants, but they have not yet reached the stage of denting. A better than average yield of fodder is expected.

The inside threshing of nursery material has been completed and fall plowing of rotation plots begun.

Maximum temperature, 82°; minimum, 42°; precipitation, 0.52 inch.

HUNTLEY:

Scattered showers throughout the week have slowed down field work to some extent, but they have greatly benefited crop conditions. On most fields the weeks precipitation was sufficient to connect subsoil moisture with the surface and thus insure favorable prospects for prompt germination and growth of winter wheat. Crested wheatgrass is making a fair fall growth. Winter wheat planting has been completed on the smaller farms but is still in progress on the larger acreages. A large percentage of the fallow land is now seeded, and the precipitation of the last week has increased interest in reseeding stubble land.

Work on the plots has consisted of seeding winter wheat and rye, duckfooting fallows and roads, harvesting sorgo and soybeans, and threshing nursery wheat.

Maximum temperature, 87°; minimum, 40°; precipitation, 0.56 inch.

SHERIDAN:

Continued alternate warm and cool weather prevailed over the week, with considerable cloudiness, but no rain of any consequence, and with a light frost this morning (10th).

Harvesting of corn and forage sorghum was completed, with the exception of some late varieties of sorghum. Plowing for winter wheat also was completed, but plowing of other plots was delayed in hopes of getting some moisture first. No seeding has yet been done, the soil being dried out deeper than the seed can be sown on practically all land.

Maximum temperature, 91°; minimum, 36°; precipitation, 0.07 inch.

MANDAN:

Agronomy - The beginning of the week was hot and dry. This was followed by an inch of rain on the 5th that came down slowly and all soaked in. The rest of the week was cloudy and cool with several light showers.

Soil was a little too wet for field work during the week. Crested wheatgrass has started a nice growth since the rain.

Maximum temperature, 93°; minimum, 52°; precipitation, 1.15 inches.

Cooperative Grazing Experiment - The rains of the past week will help the native pastures to some extent for new growth, but the most benefit will be better moisture conditions for going into the winter.

Crested wheat pasture has started some new growth, but it is too late to be of much use this season.

Horticulture - Rain and damp weather prevented fruit picking during the week. Late varieties of plums and crabs are not ready to harvest. Dead wood has been removed from fruit trees and hauled away.

Onions, beans, and melons have been harvested during the week; but other fall crops such as squash, pumpkin, late cabbage, and late planted root crops, are being left to benefit as long as possible from the splendid growing weather of the last week.

Propagation of tender bedding plants by cuttings in the greenhouse was started the latter part of the week. All varieties have made good growth, and the supply of propagating material is ample.

Cannas are at their best and present flaming bits of color about the landscape. Hybrid rugosa roses such as Conrad F. Meyer, Sir Thomas Lipton, and Hansa have produced blooms intermittently during the summer and still present a pleasing bit of color among the shrubbery groups.

Arboriculture - Soil sampling in various tree blocks has been continued during the week. A number of spruce transplants have been planted in the windbreak. Moisture received during the week has been very beneficial for seedling growth. Seedlings of several species have made more growth the past few days than during the previous two months as a result of the moisture and disappearance of grasshoppers. Previously hoppers had eaten the new growth as fast as it was made.

Dr. J. A. Munro, State Entomologist, has been here the last two days studying the diseases and insect situation on the Station.

ARCHER:

The weather during the week was cool and at times threatening. Local showers occurred but on the whole the weather gave the appearance of a slow clearing up from last week's rains.

Corn and millet, especially the late varieties of corn have greatly improved during the week. Winter cereals look very well. Fall-seeded grasses have emerged, and shattered crested wheatgrass seed has germinated and is green. The mature stands of crested wheatgrass are furnishing excellent pasture.

During the fore part of the week the station activities consisted of repairing fences. When the soil permitted, the cutting of corn was undertaken. Silage cutting started to-day.

Director W. L. Quayle visited the station September 10.

Maximum temperature, 80°; minimum, 44°; precipitation, 0.30 inch.

NORTH PLATTE:

Damp, cool weather continued throughout the week. A heavy rain fell on Sunday night, and a second good rain fell on Tuesday evening. A light shower fell today (Saturday). To date 3.82 inches of precipitation have been recorded for September, and this is nearly triple the normal rainfall for the entire month. The rainfall for the year so far since January 1 is 1.78 inches above the normal for the entire year.

The late fall plowing for wheat was done during the week. The remaining corn plots (continuous cropped and wide spaced plots) were harvested, and seeding of wheat in corn stalks of the basin listed experiment was started. There is a heavy volunteer growth of wheat on the stubble plots, and several volunteer fields in this area are being left to produce wheat. There is a heavy demand for seed wheat this fall due to the favorable moisture conditions. Pastures are greening up and appear to be in excellent condition.

Maximum temperature, 91°; minimum, 58°; precipitation, 2.04 inches.

AKRON:

Precipitation has been recorded at this station on 9 of the past 17 days, but for a total of only 1.28 inches. This is really inadequate for our wheat seeding needs.

Sudan grass on the forage belt, already harvested once, now presents the appearance of a vast framed picture, the borders about 8 feet wide standing about 40 inches high and the interior heading at not over 10 inches. Dry beans are ripening. Highland, Improved Coes, Colby, and Sooner grain sorghums made rapid progress toward maturity and are now close to the binder harvest stage.

Wheat varieties were seeded Friday, and preparations were practically completed for seeding the rotations early next week.

J. J. Curtis came down from Fort Collins and supervised the winter wheat variety seeding and returned with Horace Smith, and Herbert Kraemer, State College students who have spent the past three months here.

Maximum temperature, 89°; minimum, 52°; precipitation, 0.37 inch.

COLBY:

The weather was cool and rainy the fore part of the week, but the last three days were hot and sultry. It has been windy most of the time, but there was no soil blowing, except on an occasional field which has not been worked since the surface was packed by dashing rains.

Corn and sorghums are beginning to deteriorate again, except where the rains of last week were unusually heavy. Many sorghum fields dried up, but many will produce a fair abundance of feed, and grain sorghums of early maturing varieties will produce a fair crop of grain. Wheat seeding is on in full blast. On many of the early sown fields the wheat is up. Considerable volunteer wheat is coming up also. Grasshoppers do not seem to be doing much damage so far.

The corn plots were cut Friday. On all but the fallow and the diked plots the stalks were almost dried up. There were only a few nubbins on any of the plots.

Dr. Auchter, Dr. Leighty, Mr. Chilcott, and Dean Call visited the station Wednesday.

Maximum temperature, 97°; minimum, 57°; precipitation, 0.15 inch.

HAYS:

The first part of the week was partly cloudy and damp with two light showers. The last part of the week was clear, dry, and breezy.

Sorghum crops are wilting severely, and the development of grain is again retarded. Some of the heads that emerged are developing grain and some will be grainless. Pink kafir, Dwarf Yellow milo, and Wheatland milo used on the Dry Land Project plots are among the poorest varieties for this year, according to results that may be observed at this time on the Cereal Project variety experiments.

Among station visitors during the week were Dr. E. C. Auchter, Chief of the Bureau of Plant Industry, Washington, D. C.; Dr. C. E. Leighty, In Charge of the Division of Dry Land Agriculture, Washington, D. C.; E. F. Chilcott, Superintendent, Southern Great Plains Field Station, Woodward, Okla.; L. E. Call, Director, Kansas State Experiment Station, Manhattan, Kansas; Walter Urban Garstka, Watershed and Hydrologic Studies Section, Soil Conservation Service, Washington, D. C.; R. R. Drake, Soil Conservation Service, Lincoln Nebr.; Elwyn L. Cady, Senior Marketing Specialist, Federal Crop Insurance, Kansas City, Mo.; Lawrence Norton, State Crop Insurance Superintendent, Manhattan, Kans.; a delegation of 125 men including State Extension men, County agents and Master Farmers; and 30 farmers seeking information on tillage and crops.

Maximum temperature, 99°; minimum, 62°; precipitation, 0.38 inch.

GARDEN CITY:

The rainfall this week amounted to 0.55 inch, making the total thus far this month 2.38 inches, while the normal for the entire month is 1.71 inches. These rains came too late for the row crops. They have greened up considerably and are booting since the rains, but they will not mature.

Wheat seeding is in full swing in this area, and the farmers are working day and night to take advantage of the moist seedbeds. Wheat seeding on the station will commence next week.

Field work consisted of leveling ridges, springtoothing plots that go to wheat, packing, rodweeding fallow plots, and taking soil moisture samples.

Station visitors were E. C. Auchter, C. E. Leighty and E. F. Chilcott.

Maximum temperature, 93°; minimum, 63°; precipitation, 0.55 inch.

TUCUMCARI:

Rain on five days and much lower temperatures wrought a marked change in local conditions. Rainfall in surrounding territory was much heavier than at Tucumcari. The total here for the month to date is 2 inches, nearby points report from 3.5 to 6 inches over the same period. Total for the year to date, 9.64 inches; normal for this period, 12.85 inches.

Early sorghums and the corn will not recover, but late sorghums and crops other than corn should respond to the improved conditions. Wheat land in the southern part of the county is in excellent condition. Seeding will start immediately, although in many instances farmers will attempt first to kill volunteer which did not germinate until the rains of the past ten days.

Ranges were short and dry up to the close of August, and it is questionable just how much recovery will take place. Grazing will improve, but it is not likely much grass will reach seed maturity in this locality. Cattle are in excellent condition, and many are being marketed early.

Lark buntings have migrated, after taking a heavy toll of all sorghum plots. Rotation sorghums show injury ranging from perhaps 20 percent up to 75 percent. Early grain sorghum variety plots were in many cases practically "stripped".

Work included harvesting Sudan grass and cowpeas, harvest of early grain sorghum plots, and preparing for wheat seeding.

Dr. J. H. Martin and J. B. Sieglinger visited the station during the week.

Maximum temperature, 87°; minimum, 61°; precipitation, 1.58 inches.

DALHART:

Precipitation was recorded on each of the first 7 days of September. The total precipitation for this continuous rainy spell was 4.12 inches. While there was some run-off, there was no appreciable loss on the station; the soil came as near retaining all of the rainfall as seemed possible. This precipitation came too late to mature grain sorghums that had not headed. The crops are showing good response, and good forage crops can now be expected. Sorghums which had passed their normal heading stage without complete heading are showing the poorest response. Cowpeas and Sudan grass are showing quick growth. Where milo-disease was only faintly in evidence before the rainy spell, it is now clearly showing. Contrary to what might be expected, the contrast comes not from the response of the resistant plants but to the rapid spreading of the orange-yellow color of the susceptible plants since the rains.

Roadways were graded this week, which was the first time that this job could be done satisfactorily this year. Winter rye was drilled into all tree plantings and the vineyard. Good emergence is expected.

Dr. E. C. Auchter, Dr. C. E. Leighty, E. F. Chilcott, Dr. John H. Martin, John B. Sieglinger, D. A. Savage, and D. R. Burnham of the Bureau and Mr. J. E. Smith, Jr., of the S.C.S. were visitors during the week.

Maximum temperature, 84°; minimum, 59°; precipitation, 3.85 inches. The precipitation for the year now totals 11.01 inches.

BIG SPRING:

Feed crops have suffered considerably as a result of the continued dry, hot weather during the past week. Cotton continues to bloom freely, but it also continues to shed many of the squares which are being put on. With a normal frost free period this fall, there is only a limited time left for cotton to set balls and mature them. Although leaf worms on the Station seem to be under control, many farmers are still poisoning for them.

Station work has consisted mainly of cutting an increase field of Sumac and filling a trench silo. The Sumac was of high quality and yeilded 8.5 tons of ensilage per acre; 82 tons was put in for use in cattle feeding experiments this winter.

Maximum temperature, 96°; minimum, 64°; precipitation, none.

WOODWARD:

Two showers during the fore part of the week furnished a total of 0.26 inch. This helped in cooling the weather temporarily, by the latter part of the week the temperatures were in the high nineties again.

Cotton was picked for the first time this season. The results show more lint cotton from the one picking than from all three pickings last year. The plot on the west place yielded slightly higher than the plot on the east place, this is in the reverse order for last year's total results but might be due to date of planting. The bolls are normal in size and number, but they are not opening as wide as they should, which is as expected following a dry period.

Sorghums have revived to some extent since the rains of last week.

Fallow plots J-2 to J-12, inclusive, were field cultivated to stop wind erosion.

General field work consisted mostly of taking soil moisture samples, drilling wheat in windbreaks, cultivating wheat fields, pruning trees in nursery, and picking tomatoes.

Station visitors were Dr. E. C. Auchter; Dr. C. E. Leighty; James E. Smith and Phillip Allen, Soil Conservation Service, Amarillo, Texas; W. M. Osborn and A. W. Crain, Lawton; Messers Sherfey and Bryant, Soil Conservation Service, Salina, Kansas, and Grover B. Hill of A.A.A., Amarillo.

Maximum temperature, 97°; minimum, 65°; precipitation, 0.26 inch.

PENDLETON:

Warm weather has prevailed most of the past two weeks, with temperatures above normal. One shower of 0.12 inch settled the dust for a few hours. Station work has consisted chiefly of hoeing weeds, cleaning grass seed, and cleaning up odds and ends. Most of the farmers are marking time until seeding operations are under way. Present indications are that seeding will be late again as usual. Cultivation operations on summerfallow have been fewer in number than usual, weed growth has not been so persistent and numerous as in the case most years. Moisture in the fallow land is rather close to the surface, the soil being dry to an average depth of about 3 inches. Seedings with a deep furrow drill should bring good emergence.

Precipitation during July and August 0.06 inch, 9 yr. average 0.25 inch

Maximum temperature, 97°; minimum, 39°; precipitation, 0.12 inch.

OCT 11 1938
PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

GPO 123668

SEP 17 1938

Not for publication without
prior consent of this division.

REPORT FOR THE WEEK ENDING SEPTEMBER 17, 1938.

HAVRE:

Clear, warm weather characterized the week, the mean temperature being 7° above normal. Precipitation to date in September has been sufficient for the germination of fall sown grains and grass. Whereas frost has occurred at higher elevations, there has been none thus far in the vicinity of the station.

Corn picking was about completed in the experimental field, and stover is now being cut. Winter wheat and winter rye plantings and fall plantings of crested wheatgrass were made in the D.L.A. project. Several older grass plots having thin stands were reseeded.

Stacking the second crop of alfalfa was completed, and grain hay from various farm fields is being hauled. W.P.A. activities included pouring concrete for the main entrance auto pass and repairing bridges.

R. T. Clark, head of the Animal Husbandry Department, Montana State College, and E. H. Sandberg, F.S.A., Denver, were among station visitors.

Maximum temperature, 89°; minimum, 42°; precipitation, 0.04 inch.

JUDITH BASIN:

The past week was very fall like with only one warm day. Weather was favorable for fall work.

Fall tillage of rotation plots was finished and seedings were completed. The Cereal winter wheat nurseries were sown the first of the week.

Rotation corn was cut as were also most of the varieties. Many of the hybrids seem to be unadapted for this area and emphasize the necessity for extensive work with the State Corn Program.

The steers on the crested wheatgrass pasture were checked on the 15th and are still making good gains, although the grass is dry and very ripe. They have been on pasture about 140 days so far this season.

Quite large acreages in this vicinity are being seeded to winter wheat.

Maximum temperature, 84°; minimum, 40°; precipitation, none.

HUNTLEY:

Fair weather throughout the week enabled farmers to make considerable progress with fall work. Bean harvesting, silo filling, and haying have started on the general farms, while wheat seeding is still the principal activity on the grain ranches. Wheat sown early on fallow is now coming up on the benchland farms, especially where a furrow drill was used. Conditions appear to be excellent for the crop to become well established before cold weather arrives.

Winter wheat and rye have emerged on fallow plots in the rotation field, but on other seedbeds the crops are making a poor showing to date. Crested wheatgrass is getting quite green, and a thick stand of seedling grass is coming up in roads and alleys as a result of seed shattered out at harvest time.

Hogs in the pasture experiments were moved from the sorgo-soybean plot and placed on the plot of manure corn early in the week. Although the yield of ear corn was above the average, most of the crop appears to be cleaned up at the end of the week.

Maximum temperature, 81°; minimum, 40°; precipitation, none.

SHERIDAN:

Fair weather with just slightly above normal temperatures for the season prevailed over the week. Flax, late dates of seeding oats, and some Sudan grass for seed were threshed. Fall plowing in the rotations, with many plots only scratching the surface with the disk plow, was completed, and a few plots of the earliest harvested corn were husked. Preparation of land was completed for seeding fall grain, except the varieties, but no seeding will be done until it rains or the season is too far advanced to wait further for rain.

The high, low, and average yields of grain obtained in the rotations this year were as follows, in bushels per acre:

	High	Rotation No.	Low	Rotation No.	Average
W. wheat	42.3	132(G.M.Sw,Clo.)	8.3	571(Cont.st.)	32.5
Sp. wheat	41.0	69(Man.D.C.)	20.0	MCF(Fall dam listed)	33.4
Oats	82.8	16(G.M.Peas)	35.3	69(F.P. wht)	61.2
Barley	64.8	MCC(Fallow)	28.5	MCF(Fall dam listed)	46.6
Flax	15.0	244(F.P.Corn)	7.5	41(brome sod)	11.6

Maximum temperature, 81°; minimum, 37°; precipitation, none.

DICKINSON:

No precipitation fell during the week, and only 0.10 inch was recorded the previous week when hard showers fell in some districts.

Increase corn was cut and run into the silo. This field was injured only slightly by grasshoppers and contained a good yield of ears. The corn on the rotations in tenth-acre plots was severely injured. Corn varieties were harvested.

Winter wheat varieties were seeded in corn stubble, but this is too dry for germination.

A few late plums and some crabs were harvested.

Maximum temperature, 80°; minimum, 33°; precipitation, none.

MANDAN:

Agronomy - Winter rye was seeded in the rotations on about the average date. Soil was in good condition for seeding. Some grass plantings were also made during the week.

Russian thistles have made a rather heavy growth in the rotations since harvest.

Maximum temperature, 78°; minimum, 38°; precipitation, 0.10 inch.

Cooperative Grazing Experiment - Crested wheatgrass has made a good growth since the rain early in the month. Steers have access to both the crested wheatgrass and native range at present. They are now staying entirely on the crested wheatgrass. The reverse was true before the new growth started.

Horticulture - Propagation of bedding plants for next year has been carried on during the week.

After the recent rains, late vegetables have taken on a new lease of life and are yielding very well at the present time.

Melons and squashes have been in their prime during the week. Peppers, eggplant, tomatoes, etc, are excellent this year; and it is many years since late cabbage has attained the size it has this year, 15-20 lbs being the average.

So far no frost has been experienced, and flowerbeds and lawns are in as good condition as they have ever been at this time of the year. Phlox, Oxeye, daisy (Pyrethrum uligonosum), Gaillardia, and second growth of Delphiniums produce a fine show of color in the perennial borders with late perennial asters just coming on to give succession of bloom.

Arboriculture - The collection of Russian-olive seed has been carried on all the week. Birds have been causing heavy damage to the seed crop, and it was necessary to collect it somewhat on the green side.

R. L. Shotwell, Bureau of Entomology and Roy V. Baxter, Forestry, Montana State College, were visitors during the week.

BELLE FOURCHE: (Report for two weeks period ending September 17, 1938.)

The greater part of the period was unsettled, cloudy, and damp, but clear, ideal autumn weather prevailed during the last few days. Heavy mists and light showers were of frequent occurrence, but the precipitation was negligible, except for 0.49 inch received in a steady rain on September 12 and 13. Temperatures remained 10° or more above freezing until the night of September 17, when a minimum of 36° was recorded.

Seeding of winter wheat on rotation plots was postponed, as late fall plowed land is too dry and hard to work down to a suitable seedbed, and soil moisture conditions were not sufficiently improved by recent rains to assure germination of fall grain on other cultural treatments. Harvesting of corn was completed.

Maximum temperature, 85°; minimum, 36°; precipitation, 0.83 inch.

ARCHER:

The fore part of the week was marked by heavy precipitation. The weather cleared later, and clear days with heavy dew in the morning followed. These conditions were favorable for fall tillage and seeding. The heavy precipitation during the first half of September caused considerable spoilage of hay. Grasses are green and a number of annual weeds have emerged, downy bromegrass being in excellent condition.

Station activities consisted of pulling beans and putting up corn silage.

Maximum temperature, 73°; minimum, 41°; precipitation, 1.67 inches.

NORTH PLATTE:

The rain period of the first two weeks of September ended the middle of the week, and typical autumn weather prevailed the rest of the week. There have been only a few days so far this month that the fields have been dry enough to work. Wheat seeded in the corn stalks of the basin lister experiment is emerging. The winter wheat nursery was seeded during the week. There are very few grasshoppers and there probably won't be much damage to the wheat seeded this fall.

The potatoes in the D.L.A. plots were harvested this week. The yields were poor and the potatoes were mostly small. "Purple top" has caused a great loss in potatoes in western Nebraska this year. This was the first year that the disease has spread so far east in Nebraska, and control measures were not used early enough to prevent the loss. The total yields from all plots average 49 bushels, of which about 50 percent were No. 1. The yield of No. 1 potatoes from plots after summer till, corn, and winter wheat were 24.0, 18.5, and 20.0 bushels respectively. The Early Kalo in the plots looks good and will make a good yield.

About 50 interested farmers attended the livestock-pasture and sorghum tour held at the station on Friday.

Maximum temperature, 77°; minimum, 46°; precipitation, 0.74 inch.

AKRON:

Local showers continued over the region the fore part of the week, but the station again shared but lightly. Up to the 12th there had been measurable precipitation on 11 of the preceeding 19 days, but with a total of only 1.52 inches at this station.

Rotation winter wheat and rye plots were seeded on the 15th with excellent prospects for prompt emergence on all preparations. Bean harvesting demanded some attention. Hay millets and some increase blocks of Sudan grass were harvested. J. J. Curtis and Horace Smith came down from Fort Collins Thursday and stayed to aid with the seeding of the Cereal winter nursery.

Grain sorghums are slower in ripening than at any time within recent years, but the earlier sorts now promise to mature if a hard freeze does not come within the next 2 weeks. They have done a good job of evading the bad effect of the dry late summer period and again promise to sharply outyield corn.

Maximum temperature, 80°; minimum, 41°; precipitation, 0.29 inch.

COLBY:

The weather continues dry and much cooler. There have been no winds of consequence lately so that no soil blowing has occurred. About three-fourths of the wheat seeding is finished. Much of the wheat is up and making a nice growth. There is a lot of volunteer wheat also, the whole country is taking on a distinctly greenish cast. The sorghums are continuing to dry up and ripen. Sooner milo fields are ripe generally as are also the earlier fields of Colby milo. Much of the Colby milo is later than the Sooner this year.

The winter wheat on the plots was seeded Friday. The ground was dry on top, but there appeared to be enough moisture in the seed bed for germination. The ground worked nicely.

Maximum temperature, 95°; minimum, 43°; precipitation, 0.11 inch.

HAYS:

The first part of the week was part cloudy and damp. A good rain occurred on the 13th. The last part of the week has been, for the most part, clear and cool.

The rain that fell this week put more life into the sorghums than the heavier rains in August. Out of the all but drought-wrecked sorghums on the project, may now came some grain. Should summer last long enough, some fair yields will be harvested on a few plots.

A second crop of volunteer wheat has developed on all the wheat stubble plots that are being prepared for wheat. This means that another tillage operation will be necessary before seeding.

The plots to receive late preparation for wheat received their initial tillage operation September 15. This includes four late plowed and two late disked plots.

This week has been another "heavy visitor" week. The visitors included a delegation of Extension men and county agents from Nebraska, some machinery representatives, and farmers interested in work on the station.

Maximum temperature, 101°; minimum, 43°; precipitation, 1.14 inches.

GARDEN CITY:

A heavy rain of 1.95 inches was received this week, and most of it came in less than an hour. There was considerable run-off from smooth land and some erosion. Many farmers over this area who had their wheat in previous to the rain will replant due to crusting and washing. The total amount of rainfall thus far this month is 4.33 inches. Considerable dust blew on the last day of the week, and most of it was local.

Field work consisted of springtoothing and rodweeding plots that go to wheat, drilling wheat, and taking soil moisture samples.

Row crops are heading, but the heads are small and will probably not mature grain.

Station visitors were Fred Sykes, R. R. Hinde, Soil Conservation Service, Amarillo, Texas; and H. K. Richwine, Soil Conservation Service, Liberal, Kansas.

Maximum temperature, 94°; minimum, 45°; precipitation, 1.95 inches.

TUCUMCARI:

Much cooler weather prevailed over the week; several cloudy days resulted in only 0.06 inch precipitation, bringing the total for the year to date to 9.70 inches or 3.5 inches below normal for the period.

Station work consisted of pulling and seeding broomcorn, harvesting Sudan grass, making stalk counts on sorghums, and seeding wheat and rye plots and increase fields.

Late sorghums and ranges are responding to the rains of early this month, but early sorghums and corn revived but little.

Cattle are in good flesh, moving early, and prices are highly satisfactory. Wheat farmers in the southern portion of the county report seeding conditions perfect, with good moisture through the second or third foot.

Maximum temperature, 89°; minimum, 52°; precipitation, 0.06 inch.

DALHART:

Growth response to the rains reported for the first 7 days of September has been both rapid and slow. Growth has been rapid for the late planted sorghums and millets where these crops were not checked in growth prior to August 31. In all cases where growth had been arrested, the response has varied with the length of this summer dormant period or with the intensity or both. Cowpeas are increasing in growth, but at a relatively slow rate. Rye planted as a cover crop in the vineyard, tree plantings, and exposed locations during the past 10 days has showed first emergence 3 days after planting and full emergence in 4. Good stands are in evidence. Rye was also seeded on all roadways, but the stands will be incomplete there. Rotation plots were seeded to winter wheat during the week; the rye plots were seeded also, except where rye follows cowpeas.

Where farmers have planned to seed wheat, this operation is going forward. Grass growth is fairly good to good since the rains. Grama grass is heading.

Maximum temperature, 87°; minimum, 50°; precipitation, none.

BIG SPRING:

The days have remained warm, but the minimum is dropping a little each night.

Cotton is just starting to open in the plots, but they will not be ready to pick for another 10 days; this will make the first picking about 3 weeks later than normal. Sorghums are maturing rapidly, but the dry weather has reduced the yields somewhat.

Station work has consisted of harvesting kafir and broomcorn in the rotations also some milo plots that were starting to fall. Some bagged heads for seed were gathered, and some sorghum varieties were harvested.

Maximum temperature, 98°; minimum, 51°; precipitation, 0.08 inch.

LAWTON:

The moisture deficiency over most of southwestern Oklahoma continues without much change. The rough, dry seed beds do not offer much prospect for fall pasture from such fall sown crops as wheat, oats, and barley. The 0.76 inch of precipitation received September 1 to 3 did not provide enough moisture to warrant seeding on ground that was in a fairly good state of tilth. However, most of the volunteer grain should be started by this rain. Temperatures varied from maxima of 78° to 101° during the past week, but in general it has been quite cool. A minimum of 50° was recorded on the 16th.

All the station plots of cotton have been picked once, and quite a number have been picked twice. The bolls attained about normal size, and a good grade of lint and satisfactory staple obtain this fall. Picking on the cooperative experimental project will begin on the 19th.

Kafir yields on the rotation plots were surprisingly better, both in quality and quantity, than was anticipated. The average yield on fall plowing was 29.1 bu., on spring plowing 22.5 bu., on fallow 29.6 bu., on listing 19.7 bu., and on subsoiling 32.5 bu. The average test weight per bu., was 58 pounds.

Spur feterita weighed 51 to 53 pounds per bu. and yielded 18.1 bu. on fall plowing, 14.9 bu. on spring plowing, 22.2 bu. on fallow, and 22.8 bu. on green manure.

The annual county 4H Club fair was held on the station September 12 and 13. The attendance was good and the quantity and quality of exhibits averaged about as in past years.

Mr. Willard Beatty, Head, Education Department, Indian Office, Washington, D. C. and Mr. George C. Wells, Head, Indian Education, Oklahoma City, and Mr. H. A. Daniels of the Guthrie Okla. station were recent station visitors.

WOODWARD:

Cooler weather was ushered in by a shower of 0.88 inch Monday afternoon. The temperature got into the nineties on the first two days of the week but the maximum for the remainder of the week has been down in the seventies and eighties, with a minimum of 48° on Friday morning.

Field cultivation of plots in preparation for wheat was well under way when halted by the rain; this was completed Friday. Too much straw still remains on the plots receiving the one-way treatment following harvest to use the field cultivator, providing the straw is damp.

Many farmers have started sowing wheat, which means sacrificing yields in bushels at harvest for pasture and to control blowing.

Most all kafirs in rotations are matured or approaching that stage. Five plots were harvested during the week. The rapidity of maturing was halted some by the rain and cooler weather.

Broomcorn on plots A, B, C, E, Contour A, and Contour B was harvested and seeded. Plots F and G in the M.C. series were not mature enough to be harvested this week. Seedlings from the first planting were damaged by a torrential rain, which necessitated replanting and delayed growth. Brush harvested from contour basin-listed plots A and B was superior in quality to brush from the other plots. The brush was caught by the dry period in August while coming out of the boot and growth seemed to be checked to a standstill until rain was received about the middle of August, at which time the brush was pushed out a little more before ripening. Broomcorn on contour basin-listed plots A and B was less uniform than on the other plots in heading and somewhat later. This helped in evading the damage the others caught while remaining in the boot so long.

Station visitors during the week were J. H. Martin, Cereal Division of B. P. I., Mr. Cornelious, S. C. S. of Manhattan, Kansas Mr. Reynolds, S. C. S. of Dalhart, Texas, H. E. Daniels, S. C. S. of Guthrie, Oklahoma, C. H. Whitfield, Research Division of S. C. S. of Amarillo, Texas, James E. Smith, Nursery Section of S. C. S. at Amarillo, Texas, Phillip Allen, S. C. S. at Amarillo, Texas, Grover B. Hill, Range Section of A. A. A. at Amarillo, Texas, and Messers. Sikes, Cavett, Hide, Caird, of S. C. S. at Amarillo, Texas.

Maximum temperature, 98°; minimum, 48°; precipitation, 0.88 inch.

PENDLETON:

Field work in this area is at a standstill, as most farmers have all the weeds removed from their fallow land and conditions are not right for seeding. Hot weather has prevailed all week with a maximum temperature of 93° on the 15th. The station fanning mill has been in almost constant use during the past two weeks by farmers cleaning small lots of Crested wheatgrass. J. Foster Martin in charge of the work of the Division of Cereal Crops and Diseases on this station left on the 16th for the University of Wisconsin where he will start work on his doctor's degree.

Maximum temperature, 93°; minimum, 39°; precipitation, none.

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REPORT FOR THE WEEK ENDING SEPTEMBER 24, 1938.

HAVRE:

Favorable weather for field work prevailed, with temperatures considerably above normal. The surface soil is becoming rather dry for the germination of winter grains and grass.

Cutting corn stover was completed in the experimental field. Sorgo, Sudan grass, and late corn were also harvested. Considerable seed corn has been obtained from increase blocks, and the remaining nursery material has been picked. A Soil Conservation Service fall sown grass nursery was planted in stubble.

The farm department finished seeding winter rye for hay and pasture, and commercial fallow fields received a final cultivation. Hauling and stacking grain hay continued.

Maximum temperature, 93°; minimum, 38°; precipitation, none.

JUDITH BASIN:

The weather during the past week was more like July than September. No precipitation has been recorded for two weeks.

Only one field of bulk corn remains to be cut. Crested wheatgrass seed was cleaned for market. The bulk field in rows yielded 270 pounds of clean seed per acre compared to 150 pounds from the small bulk field of solid seeding. The station will have about 6,000 pounds of seed for sale. The high quality is indicated by the test weight of the seed, which averages about 27 pounds to the bushel.

Wayne Austin of the S.C.S., Rapid City, South Dakota, was a visitor on the 23rd.

Maximum temperature, 91°; minimum, 46°; precipitation, none.

HUNTLEY:

Minimum temperatures for the week closely approached the frost mark, but to date no crop freezing has been reported locally. Daytime temperatures have been unseasonably high and beneficial for curing hay, threshing beans, and drying fodder but have been rather detrimental to seedling winter wheat, which is beginning to look a bit dry on some seeding methods. Winter wheat on fallow has made a fair growth during the week, and stands have increased on other tillage methods but are not yet full.

Field work on the Dryland project included haying, cutting seed alfalfa, harrowing, seeding Michel's grass, and weighing pasture hogs. The hogs on the acre of corn pasture completed harvesting the grain, and the experiment was closed for the season. This is the first year for some time that pasture pigs have reached a marketable weight and condition on the annual-crop pastures. Hogs removed from the corn plot this week were taken directly to the packing house and brought top prices for the day. The average weight of the animals marketed was 211 pounds.

Maximum temperature, 93°; minimum 34°; precipitation, none.

SHERIDAN:

Fair weather continued over the entire week, with high day temperatures for the season, and low night temperatures over a part of the week. The warm weather both ripened and dried up grain sorghums rapidly. A few varieties have now ripened sufficiently to make a fair crop and to cut with the binder.

Husking corn was the principal occupation of the week. Russian thistles were raked from land for fall planting of grasses for S.C.S.

Maximum temperature, 93°; minimum, 31° (light frost - not killing); precipitation, none.

DICKINSON:

Temperatures were well above normal the middle of the week with a maximum above 90° on three days. Killing frost was recorded on the 18th when the temperature dropped to 25°. Crops had all matured during the warm and dry weather of the preceding month so that no damage resulted.

Potatoes were dug during the week. Yields generally were low, and the quality was poor. Cobblers on fallow in Rotation 414 made 67 bushels, and on spring plowed wheat ground on 415 the yield was only 36 bushels. Hard beating rain on July 2 packed the soil so hard that little growth followed, even though the soil contained a fair moisture supply.

Maximum temperature, 95°; minimum, 25°; precipitation, none.

BELLE FOURCHE:

Abnormally hot weather prevailed, except during the first 2 days which were quite cool. A minimum temperature of 34° was recorded the night of September 18, but a white frost was of general occurrence, and leaves of tender crops were partially frosted. Heavy to killing frosts occurred in low areas. No precipitation was received, and strong winds rapidly removed the small amount of moisture in the surface soil.

Maximum temperature, 92°; minimum, 34°; precipitation, trace.

ARCHER:

The weather during the week ending September 24 was clear and warm. It is reported that local light frosts occurred during the night of September 18, but there was no frost at the station. Soil moisture was favorable for the growth and maturity of corn, sorghums, and pasture grasses. Farmers are tilling their land, and a large acreage is being seeded to winter cereals. Winter cereals at the station are in very good condition.

Station activities consisted of harvesting corn and cutting millet.

Director W. L. Quayle visited the station September 19.

Maximum temperature, 82°; minimum, 38°; precipitation, none.

NORTH PLATTE:

Light frosts occurred over most of the State Monday and Tuesday nights. The temperatures at the station did not reach freezing, but frost was noticeable on the two mornings. Killing frosts were reported in some localities, particularly the east central portion of the State. Summer temperatures prevailed the rest of the week. The warm weather will aid in maturing sorghums which were not damaged by frost. No rain fell during the week.

The wheat and rye were seeded in the D.L.A. plots this week. Wheat planted a week ago has emerged and has made rapid growth the past few warm days. Most of the wheat has been seeded in this area.

Maximum temperature, 92°; minimum, 34°; precipitation, none.

AKRON:

Winter wheat seeded in the rotations the 15th is emerging over the center of the fallow plots, but only spottedly over the sides and on the corn and stubble land plots. The varieties seeded a few days earlier have emerged to satisfactory stands on both fallow and cornland preparations.

Millet threshing occupied the field force during the week. Three plots of proso on the rate and spacing project averaged 4.9 bushels of grain and 1,327 pounds of straw per acre. Three plots of foxtail millet in the same project averaged 4.5 bushels of grain and 2,283 total pounds of hay per acre. Yields are not available from the variety project but were correspondingly low.

Beans are ripening rapidly now, and the bulk of the varieties will be pulled next week. Improved Coes and Highland kafir are now ripe enough to binder harvest. Several farmers visited during the past week to look over the grain sorghum plantings.

R. P. Yates, State seed registration specialist, inspected the foundation plantings of Highland Kafir and Fremont Sorgo this morning. F. K. Reed, Agricultural Statistician located at Denver, also called this morning to inspect the sorghum plantings.

Maximum temperature, 88°; minimum 35°; precipitation, none.

COLBY:

The weather continues dry, and the last four days have been very hot. There has not been much wind. The sorghums are ripening and drying. Wheat came up to a good stand on most of the plots, but it is coming very slowly on the drier ones. Over the country generally the wheat is up nicely and is making excellent growth. Much of the volunteer wheat is beginning to show a lack of moisture.

Maximum temperature, 97°; minimum, 35°; precipitation, none.

HAYS:

The weather has been mild and quiet. The sorghum crops on the plots continue to develop slowly. The yields of sorghum on the plots will now be determined largely by the time when the first killing frost occurs. The maximum possibilities are not high on any of the plots.

Conditions have been ideal for completion of seedbed preparation for winter wheat.

Some rain the first week in September put surface soil in ideal condition for drilling, and the temptation for seeding was too great to be resisted. Early seeding prevailed, and most of the wheat throughout the country has already been seeded. The earliest seedings are up sufficiently well to make the fields look green from the road. A few farmers have delayed seeding to kill another crop of volunteer and are now drilling. Drilling will be commenced on the Dry Land plots and on the commercial fields of the Experiment Station next Monday. Winter rye for green manure was seeded on the plots this week.

Visitors during the week included Dr. John H. Martin and Dr. L. E. Melchers.

Maximum temperature, 95°; minimum, 39°; precipitation, none.

GARDEN CITY:

The weather this week was nearly ideal with low wind velocities, warm days, and cool nights. The sorghums are trying their best to beat Jack Frost, but it appears to be a hopeless race. The wheat is coming up with good stands.

Field work consisted of completing wheat seeding, rodweeding sorghum fallow plots, and getting the project ready for Field Day.

Maximum temperature, 92°; minimum, 44°; precipitation, none.

TUCUMCARI:

The week was calm, with temperatures above normal. No precipitation was received and revival of late crops, noticeable after the rains early this month, is but slightly apparent. Early sorghums are mature with yields very low. Later dates and varieties will produce higher yields, but will be far below normal.

Precipitation for the year to date, 9.70 inches, is some 4 inches below normal for the period.

Maximum temperature, 90°; minimum, 50°; precipitation, none.

DALHART:

Winter wheat and rye on the rotations show good stands and now give promise of good fall growth. Rye which was seeded on the roadways for a protective crop will be good apparently in those places where it is most needed. The vineyard and tree plantings are showing good stands and vigorous plants except for part of the conifer planting. The rye plants are thin on this but well distributed; this thinner stand is quite likely because of one sack of old seed which was not of as high germination as the other seed used. The windbreak strip in the north field which has not been touched (cultivated or seeded) in three years was disked ahead of seeding and drilled to rye. This now shows an excellent stand and good growth at this time. As emergence to stand was in 4 days after seeding, and as the plants are this year reaching the 'blow-proof' stage in 10 days we are now reasonably sure of a cover crop on land which was in bad blow condition. The balk strips in the tree variety planting, which were formerly native sod but accumulated soil which destroyed the sod, were also seeded to winter rye.

These balk strips had at various times accumulated blow soil; this had by harrowing at the proper times been entirely disposed of. The rye now on these strips shows the most vigor and fully as thick a stand as any rye seeded this fall -- there was no cultural treatment previous to seeding.

The grain sorghums on the rotations have nearly completed heading, but the only grain which is expected to mature is from those heads that emerged at the normal August heading time. The later heads of milo are chiefly small and deformed. The kafir heads are nearer normal in size. Broomcorn planted on fallow June 27 was either pulled during the week or is ready to pull. Sudan grass planted July 19 and 20 is ready for harvest for hay but will possibly not be harvested much before the end of this month. It averages a good 5 feet in height and has excellent color and vigor.

Height notes for the season were nearly completed for all tree plantings. An incomplete study of the growth of the trees along a sand accumulation (a half mile of trees) shows that the growth since planting is nearly directly comparable to those in less exposed conditions.

Among the visitors during the week were M. M. Hoover and J. E. Smith of the S.C.S. and F. E. Keating and D. R. Burnham of this division.

Maximum temperature, 87°; minimum, 46°; precipitation, none.

BIG SPRING:

Warm, dry weather has continued during the past week. This has caused some of the late planted cotton to open prematurely. About 400 bales have been ginned in this county to date, which is considered very light for this time of the season.

Station sorghums have also matured so rapidly during the week that a large number of plots in the rotations and varieties will have to be headed during the next few days.

Increase fields of Sumac and hegari were harvested during the week; the Sumac matured fairly well, but the shortage of soil moisture prevented the hegari from maturing much grain.

Maximum temperature, 95°; minimum, 51°; precipitation, none.

LAWTON:

Decidedly cool weather prevailed during the first half of the week with a minimum temperature of 44° on the 20th and frost in the eastern part of the State. That was the earliest frost record since 1902. During the latter half of the week the temperatures were reversed and the maxima ranged from 94° to 98°.

The later pickings of cotton opened rapidly during the high temperatures of the past few days.

Seeding of small grains continues to be a discouraging problem in view of the moisture shortage throughout the southwestern part of the State.

WOODWARD:

The week came to a close without rain and very little cloudy weather. Temperature dropped to a minimum of 42° on Tuesday morning and raised to a maximum of 94° on Saturday. Watering of the campus, horticultural nursery, and tree nursery became effective again the later part of the week.

Broomcorn on plots F and G was harvested. The remainder of the brush on contour basin listed plots A and B, not matured enough to pull last week, was pulled, seeded, and the stover harvested. Most of the brush was of lower quality than brush from first pulling. Most of the kafir in rotations was harvested during the week.

Wheat drilled in the windbreaks, vineyard, and roadways has emerged to a good stand and is growing rapidly. The ground should be well protected from wind erosion this winter and spring providing adequate moisture is received in the future.

Station visitors during the week were A. L. Hallsted; F. P. Eshbaugh, Forestry Nurseryman, L. E. Wenger, Forage Crop Investigations, and F. L. Timmons, Bind Weed Control, from the Hays station; J. B. Kuska; H. J. Haas and A. E. Lowe, Garden City, Kansas; F. E. Keating; D. R. Burnham; M. M. Hoover, Nursery Section of S.C.S., Washington, D. C.; J. E. Smith, Nursery Section of S.C.S., Amarillo Texas; I. C. Coryell, Land Acquisition Staff, Little Rock, Ark.; and several groups of farmers and vocational agriculture boys.

MANDAN:

Horticulture - Fruit picking was completed on September 12 and 13. Late maturing native varieties of plums gave heavy yields. Total yields in the plum orchards were heavier than they have been since 1932. Crabapples also did well.

Arboriculture - The taking of fall notes in the various tree experiments has been in progress all the week. Data taken to date show that this is the first year since 1933 in which little or no killing back of growth has occurred. Many species have made a big increase in growth this year. Losses in stand are negligible.

Maximum temperature, 94°; minimum, 30°; precipitation, none.